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Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in this application. Please amend the claims as follows:

Claims

We Claim:

1. (Currently Amended) A method for reducing hydrogen sulfide emissions from asphalt, ~~including asphalt polymer compositions,~~ comprising:
adding zinc oxide an inorganic or organic metal salt H₂S scavenger to the asphalt
in an amount effective to reduce the evolution of hydrogen sulfide (H₂S) emission, where
the metal of the metal salt H₂S scavenger is selected from the group consisting of zinc,
cadmium, mercury, copper, silver, nickel, platinum, iron, magnesium, and mixtures
thereof; and
wherein an amount of from 0.05 wt % to less than 3.0 wt % of zinc oxide is added
to the asphalt.
2. (Cancelled).
3. (Original) The method of claim 1 where the hydrogen sulfide emission is reduced to about 50 ppm or lower.
4. (Currently Amended) The method of claim 1 where the ~~inorganic or organic metal salt~~zinc oxide is added in an amount ranging from about 0.05 to about 23 wt% based on the asphalt.
5. (Cancelled).
6. (Original) The method of claim 1 further comprising adding a crosslinker to the asphalt, where the crosslinker is selected from the group consisting of a sulfur-containing derivative and elemental sulfur and mixtures thereof.

7. (Currently Amended) The method of claim ~~65~~ where in adding the crosslinker, the crosslinker is further selected from the group consisting of elemental sulfur, mercaptobenzothiazole (MBT), thiurams, dithiocarbamates, mercaptobenzimidazole, and mixtures thereof.

8. (Currently Amended) The method of claim ~~65~~ where the total amount of crosslinker is present in an amount ranging from ~~about~~ 0.01 to 0.6 wt% active ingredients, based on the weight of the asphalt.

9. (Currently Amended) The method of claim 1 ~~where the amount of asphalt is at least 5 lbs~~ further comprised of adding aggregate.

10. (Currently Amended) A method for preparing asphalt and polymer compositions comprising:

heating a ~~mixture of asphalt and a vinyl aromatic/conjugated diene elastomeric polymer~~;

adding a crosslinker to the mixture, where the crosslinker is selected from the group consisting of elemental sulfur, mercaptobenzothiazole (MBT), thiurams, dithiocarbamates, mercaptobenzimidazole, and mixtures thereof; and

reducing the evolution of hydrogen sulfide (H_2S) emissions in the asphalt by adding an inorganic or organic metal salt H_2S scavenger to the mixture an amount of from 0.05 wt% to less than 3.0 wt% of zinc oxide in an amount effective to reduce the evolution of H_2S , where the metal of the metal salt H_2S scavenger is selected from the group consisting of zinc, cadmium, mercury, copper, silver, nickel, platinum, iron, magnesium, and mixtures thereof.

11. (Currently Amended) The method of claim 10 further comprised of adding a vinyl aromatic/conjugated diene elastomeric polymer, where reducing the evolution of H₂S comprises adding an excess of zinc oxide, where the zinc oxide is added in an amount greater than 0.15 wt% to less than 3.0 wt% at least 10 times more than that normally used and where the crosslinker is present in an amount ranging from about 0.01 to 0.6 wt%.

12. (Currently Amended) The method of claim 10 where the zinc oxide that scavenges inorganic or organic metal salt H₂S scavenger is added in an amount ranging from about 0.05 to about 23 wt.% based on the asphalt composition mixture.

13. (Cancelled).

14. (Cancelled).

15. (Original) The method of claim 10 where the hydrogen sulfide emission is reduced to about 50 ppm or lower.

16. (Currently Amended) The method of claim 10 further comprised of adding aggregate where the amount of asphalt is at least 5 pounds.

17. (Currently Amended) An method for preparing asphalt prepared by the method of claim 10, or asphalt polymer compositions with reduced hydrogen sulfide emissions comprising adding an inorganic or organic metal salt H₂S scavenger to the asphalt in an amount of about 0.05 to 3.0 wt% where the amounts are based on the asphalt or the asphalt polymer composition, where the metal in the inorganic or organic metal oxide H₂S scavenger is selected from the group consisting of zinc, cadmium, copper, magnesium and mixtures thereof.

18.-21. (Cancelled).

22. (Currently Amended) A road made from the asphalt of claim 17 and aggregate.

23. (Currently Amended) A roof sealed with the asphalt of claim 1724.
24. (Currently Amended) A method of sealing a roof with asphalt comprising heating the asphalt of claim 1724 and distributing it over at least a portion of a roof surface.
25. (Currently Amended) A method of road building comprising combining the asphalt of claim 1724 with aggregate to form a road paving material, and using the material to form road pavement.
26. (Cancelled).
27. (Currently Amended) A method of recycling asphalt comprising physically removing asphalt from a location and in any order reducing the size of the removed asphalt, heating the removed asphalt, and adding ~~an inorganic or organic metal salt H₂S scavenger~~ zinc oxide to the asphalt in an amount effective to reduce ~~the evolution of~~ hydrogen sulfide (H₂S) emissions, wherein an amount of from 0.05 wt % to less than 3.0 wt % of zinc oxide is added to the asphalt where the metal of the inorganic or organic metal salt H₂S scavenger is selected from the group consisting of zinc, cadmium, mercury, copper, silver, nickel, platinum, iron, magnesium, and mixtures thereof.
28. (Currently Amended) ~~Recycled a~~ Asphalt made by the ~~process~~ method of claim 27.
29. (Cancelled).
30. (New) The method of claim 1 where the hydrogen sulfide emission is reduced to about 10 ppm or lower.
31. (New) The method of claim 1 further comprising the step of reducing H₂S emissions by adding the cross-linking agent at 280° F.

32. (New) The method of claim 1 further comprising the step of reducing H₂S emissions by adding the cross-linking agent at a lowest temperature at which asphalt can be effectively pumped.
33. (New) An asphalt made by the method of claim 1.
34. (New) An asphalt made by the method of claim 11.
35. (New) The method of claim 27 wherein the asphalt is polymer modified and wherein greater than 0.15 wt % to less than 3.0 wt % of zinc oxide is added and where the crosslinker is present in an amount ranging from about 0.01 to 0.6 wt%.